IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keyes et al

       : Art Unit: 2164

Serial No.: 10/035,968 '

       : Examiner:

Filed: December 31, 2001

For:   METHODS AND SYSTEMS FOR
      ASSESSING LOAN PORTFOLIOS

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       :
       :
       :
       :

## CERTIFICATE OF MAILING BY EXPRESS MAIL TO
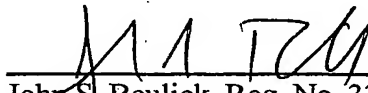## THE COMMISSIONER OF PATENTS AND TRADEMARKS

Express Mail mailing label number: **EL 752244002 US**

Date of Mailing: **April 3, 2002**

I certify that documents listed below:

- Amendment Transmittal (3 pages, in duplicate)
- Preliminary Amendment (8 pages)
- Submission Of Marked Up Paragraphs (8 pages)
- Request for Approval of Drawing Changes (1 page)
- Transmittal of Formal Drawings (1 page)
- Thirteen (13) Sheets of Formal Drawings
- Certificate of Mailing by Express Mail (1 page)
- Return Postcard

are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231.

John S. Beulick, Reg. No. 33,338
Armstrong Teasdale LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102
314-621-5070

APR 2 7 2009

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | |
|---|---|---|---|
| Applicant: | Keyes et al. | : | |
| | | : | Group No.: 2164 |
| Serial No.: | 10/035,968 | : | |
| | | : | Examiner: |
| Filed: | December 31, 2001 | : | |
| | | : | |
| For: | METHODS AND SYSTEMS | : | |
| | FOR ASSESSING LOAN | | |
| | PORTFOLIOS | | |

**Commissioner for Patents**
**Washington, D.C. 20231**

### AMENDMENT TRANSMITTAL

1. Transmitted herewith is a:
   - Preliminary Amendment
   - Submission Of Marked Up Paragraphs
   - Request for Approval of Drawing Changes
   - Transmittal of Formal Drawings
   - Certificate of Mailing By Express Mail
   - Return Post Card

### STATUS

2. Applicant

| | |
|---|---|
| _____ | Claims small entity status. |
| X | Is other than a small entity. |

APR 2 7 2002

## EXTENSION OF TERM

3.  The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

     (complete (a) or (b), as applicable)

(a)     \_\_\_\_\_     Applicant petitions for an extension of time under 37 C.F.R. 1.136
               (Fees: 37 C.F.R. 1.17(a)-(d) for the total number of months checked below:)

| Extension for response within: | Other than small entity Fee | Small entity Fee (if applicable) |
|---|---|---|
| First month | $ 110.00 | $ 55.00 |
| Second month | $ 400.00 | $ 200.00 |
| Third month | $ 920.00 | $ 460.00 |
| Fourth month | $1,440.00 | $ 720.00 |
| Fifth month | $1,960.00 | $ 980.00 |

                                             Fee:         $ _____

If an additional extension of time is required, please consider this a petition therefor.

*(Check and complete the next item, if applicable)*

\_\_\_\_\_     An extension of \_\_\_\_\_ months has already been secured. The fee paid
         therefor $\_\_\_\_\_ is deducted from the total fee due for the total months
         of extension now requested.

         Extension fee due with this request $ \_\_\_\_\_.

### OR

(b)     X     Applicant believes that no extension of term is required. However, this
         conditional petition is being made to provide for the possibility that
         applicant has inadvertently overlooked the need for a petition for extension
         of time.

APR 2 7 2000

## FEE FOR CLAIMS

4.    The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

| | (Col. 1) CLAIMS REMAINING AFTER AMENDMENT | | (Col. 2) HIGHEST NO. PREVIOUSLY PAID FOR | (Col. 3) PRESENT EXTRA | SMALL ENTITY ADDITIONAL. RATE FEE | OR | OTHER THAN SMALL ENTITY ADDITIONAL RATE FEE |
|---|---|---|---|---|---|---|---|
| TOTAL | 118 | MINUS | 118 | =0 | x $9 = $ | | x $18 = $0 |
| INDEP. | 8 | MINUS | 8 | =0 | x $42 = $ | | x $84 = $0 |
| ___ FIRST PRESENTATION OF MULTIPLE DEP. CLAIM | | | | | + $130 = $ | | + $280 = $ |
| | | | | | TOTAL ADDITIONAL FEE $ | OR | TOTAL ADDITIONAL FEE $0 |

(a)    __X__    No additional fee for Claims is required

## OR

(b)    _____    Total additional fee for claims required  $

## FEE PAYMENT

5.    _____    Attached is a check in the sum of $_____

__✓__    Charge Deposit Account No. 01-2384 the sum of $0.00.
A duplicate of this transmittal is attached.

## FEE DEFICIENCY

6.    __✓__    If any additional extension and/or fee is required, charge Deposit Account No. 01-2384.

## AND/OR

__✓__    If any additional fee for claims is required, charge Deposit Account No. 01-2384.

7.    _____    Other:


_____
John S. Beulick
Reg. No. 33,338
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, MO 63102
314/621-5070

APR 2 7 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.:  7,454,383       :

Issued:  November 18, 2008       :

Inventor(s):  Keyes et al.       :

Assignee:  GE Corporate Financial Services, Inc.       :

Title:  METHODS AND SYSTEMS FOR
ASSESSING LOAN PORTFOLIOS       :

Attention Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA  22313-1450

Certificate

APR 2 7 2009

of Correction

REQUEST FOR CERTIFICATE OF CORRECTION OF
PATENT UNDER 37 C.F.R. 1.322(a)

Sir:

Attached is Form PTO/SB/44 suitable for printing.

Submitted herewith is a copy of the Notice of Allowance and Fee(s) Due and the
Notice of Allowability dated September 29, 2008 and a copy of the Preliminary Amendment
filed April 3, 2002.  Applicants respectfully submit that the corrections shown below are in
accordance with the Preliminary Amendment filed April 3, 2002.  The correction thereof
does not involve such changes in the patent as would constitute new matter or would require
re-examination.  Applicants respectfully request a Certificate of Correction for the following:

In the Specification, column 6, line 45, after "as the 'Import Silverlake Payments' "
insert -- button) results in importing the payment data. Selecting the Import Asset Milestone
button 128 results in importing the asset milestone data. Selecting the "Back" button 130
results in returning processing to the main interface screen (e.g., the screen shown in Figure
10). --.

In Claim 5, column 7, line 42, delete "A variance tracking system, said database
comprising a computer coupled to a database said" insert therefor -- A variance tracking
system comprising a computer coupled to a database, said --.

1

APR 2 7 2009

The correction is not due to any error by Applicants and no fee is due.

The Assignment for this patent is recorded on Reel 018223/Frame 0934.

Respectfully submitted,

Date: 4-20-09

Daniel M. Fitzgerald
Reg. No. 38,880
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

APR 2 7 2009

# UNITED STATES PATENT AND TRADEMARK OFFICE
## CERTIFICATE OF CORRECTION

PATENT NO.      :   7,454,383

APPLICATION NO.   :   10/035,968

ISSUE DATE      :   November 18, 2008

INVENTOR(S)      :   Keyes et al.

**PAGE 1 OF 1**

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification, column 6, line 45, after "as the 'Import Silverlake Payments' " insert -- button) results in importing the payment data. Selecting the Import Asset Milestone button 128 results in importing the asset milestone data. Selecting the "Back" button 130 results in returning processing to the main interface screen (e.g., the screen shown in Figure 10). --.

In Claim 5, column 7, line 42, delete "A variance tracking system, said database comprising a computer coupled to a database said" insert therefor -- A variance tracking system comprising a computer coupled to a database, said --.

MAILING ADDRESS OF SENDER:
Daniel M. Fitzgerald
Armstrong Teasdale LLP
One Metropolitan Sq., Suite 2600
St. Louis, MO 63102

APR 2 7 2009

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE

| | | |
|---|---|---|
| 7590 | 09/29/2008 | |

John S. Beulick
Armstrong Teasdale LLP
Suite 2600
One Metropolitan Sq.
St. Louis, MO 63102

| EXAMINER |
|---|
| GRAHAM, CLEMENT B |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3692 | |

DATE MAILED: 09/29/2008

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/035,968 | 12/31/2001 | Tim Kerry Keyes | 17243-00042 | 3148 |

TITLE OF INVENTION: METHODS AND SYSTEMS FOR ASSESSING LOAN PORTFOLIOS

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | NO | $1440 | $300 | $0 | $1740 | 12/29/2008 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.   THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT.   SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED.   THIS STATUTORY PERIOD CANNOT BE EXTENDED.   SEE 35 U.S.C. 151.   THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION.   IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

Entered into PAGE/IP Libraries
Date: 10/6/08
By: RKG

**HOW TO REPLY TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

APR 27 2009

ENTERED
Date: 10/3/2008
By:

Page 1 of 3

SCANNED
By: M.H. 10/6/08

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

17243-42

| | Application No. | Applicant(s) |
|---|---|---|
| **_Notice of Allowability_** | 10/035,968 | KEYES ET AL. |
| | Examiner | Art Unit | |
| | Clement B. Graham | 3692 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _4/7/08_.

2. ☒ The allowed claim(s) is/are _1-17_.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some*  c) ☐ None  of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .
    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .
    **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**
1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _12/31/01_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _9/4/03_ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____ .

/Frantzy Poinvil/
Primary Examiner, Art Unit 3692

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1.      An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with

Daniel Fitzgerald September 4, 2008.

The application has been amended as follows:

Claim 1 has been replaced by:

-- Claim 1, A method for assessing a loan portfolio comprising a plurality of non-

performing loans, said method comprising the steps of:

assigning at least one characteristic to each loan included within the portfolio including at least

one of size of outstanding balance, nature of collateral security, lien information, historical

payment performance, litigation status, and underwritten valuation;

identifying a current milestone for each loan included within the portfolio at a selected time of

assessment from a series of predefined milestones, wherein the series of predefined milestones

represent different stages that non-performing loans experience prior to resolution including at

least one of not contacted, in negotiation, scheduled for approval, approved, approved

delinquent, closed, closed delinquent, paid-in-full, and foreclosed;

creating a business plan for each loan included within the portfolio including planned collections

and timing of collections for each loan;

electronically segmenting the loan portfolio based on the at least one characteristic assigned to

each loan;

electronically determining planned collections for each loan for the selected time of assessment;

electronically determining actual collections for each loan for the selected time period of

assessment;

electronically populating a spreadsheet identifying the current milestone and a cumulative

APR 2 7 2009

variance between planned collections and actual collections at the current milestone for each

loan; and

electronically determining a contribution of a portfolio segment to an overall cumulative loan

portfolio variance, wherein the portfolio segment includes each loan included within the

portfolio having an assigned characteristic that correlates with a loan characteristic selected by a

user for analysis.    - -

Claim 3 has been replaced by:

-- Claim 3,  A method according to Claim 1 wherein electronically determining planned

collections comprises the steps of denormalizing a business plan to create a list-oriented format

for each loan and each planned payment, coding planned payments to an index of time, and

determining cumulative planned collections for each loan.  - -

Claim 4 has been replaced by:

-- Claim 4,  A method according to Claim 1 wherein electronically determining actual

collections comprises the steps of coding actual payments for each loan to an index of time and

determining cumulative actual payments for each loan.   - -

Claim 5 has been replaced by:

-- Claim 5,  A variance tracking system, said database comprising a computer coupled to

a database said database comprising a memory storage having data stored therein, said database

comprising:

at least one characteristic associated with each of a plurality of non-performing loans included

within a loan portfolio, wherein the at least one characteristic assigned to each loan includes at

least one of size of outstanding balance, nature of collateral security, lien information, historical

payment performance, litigation status, and underwritten valuation;

a current milestone for each of the plurality of loans, wherein the current milestone is included

within a series of predefined milestones, wherein the series of predefined milestones represent

different stages that non-performing loans experience prior to resolution including at least one of

not contacted, in negotiation, scheduled for approval, approved, approved delinquent, closed,

APR 2 7 2008

closed delinquent, paid-in-full, and foreclosed;

a business plan for each of the plurality of loans including planned payments and timing of payments for each loan;

segments of the loan portfolio based on the at least one characteristic assigned to each loan;

actual payments for each loan;

indexes of time associated with each planned payment and with each actual payment;

a variance between each planned payment and each actual payment; and

wherein the computer is programmed to electronically determine a contribution of each portfolio segment to an overall cumulative loan portfolio variance, wherein each portfolio segment includes each loan included within the portfolio having an assigned characteristic that correlates with a loan characteristic selected by a user for analysis.  - -

Claim 6 has been replaced by:

-- Claim 6,  A computer program for controlling operation of a computer to determine variance in a loan portfolio of non-performing loans, said computer program executable to control the computer to:

assign at least one characteristic to each loan included within the portfolio including at least one of size of outstanding balance, nature of collateral security, lien information, historical payment performance, litigation status, and underwritten valuation;

associate each loan in the portfolio with one of a plurality of milestones, wherein the milestones represent different stages that non-performing loans experience prior to resolution including at least one of not contacted, in negotiation, scheduled for approval, approved, approved delinquent, closed, closed delinquent, paid-in-full, and foreclosed;

create a business plan for each loan included within the portfolio including planned collections and timing of collections for each loan;

segment the loan portfolio based on the at least one characteristic assigned to each loan;

electronically determine cumulative planned collections for each loan for a selected time of assessment;

electronically determine cumulative actual collections for each loan for the selected time period

APR 2 7 2009

of assessment;

electronically determine a cumulative variance for each loan for the selected time period of

assessment based on the cumulative planned collections and cumulative actual collections; and

electronically determine a contribution of each portfolio segment to an overall cumulative loan

portfolio variance, wherein each portfolio segment includes each loan included within the

portfolio having an assigned characteristic that correlates with a loan characteristic selected by a

user for analysis. - -

## Allowable Subject Matter

2.     Claims 1, 5-6, 11, are allowable over the prior art of record and as argued by Applicant's

representative in their response filed 4/7/2008.

## Conclusion

3.     Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Clement Graham whose telephone number is (571) 272-6797. The

examiner can normally be reached on Monday-Thursday from 7:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kambiz Abdi can be reached on (571) 272-6702. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

APR 2 7 2008.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Frantzy Poinvil/
**Primary Examiner, Art Unit 3692**

CG
Sept 4, 2008

APR 2 7 2009

17243-00042
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keyes et al.                            :

                                                    :    Art Unit:  2164

Serial No.: 10/035,968                             :

                                                    :    Examiner:

Filed:  December 31, 2001                           :

                                                    :
For:    METHODS AND SYSTEMS                         :
        FOR ASSESSING LOAN                          :
        PORTFOLIOS                                  :

**PRELIMINARY AMENDMENT**

Commissioner for Patents
Washington, D.C. 20231

     Prior to examination of the case on the merits, please amend the drawings and specification as indicated below.

<u>IN THE SPECIFICATION</u>

     On page 3, please delete paragraph [0017] and replace with the following paragraph:

     [0017]    Figure 9A is a first portion of the illustrated transition inventory display. Figure 9B is a second portion of the illustrated transition inventory display. Figure 9C is a third portion of the illustrated transition inventory display. Figure 9D is a fourth portion of the illustrated transition inventory display. Figure 9E is a fifth portion of the illustrated transition inventory display. Figure 9F is a sixth portion of the illustrated transition inventory display;

     On pages 5-10, please delete paragraphs [0025] – [0047] and replace with the following paragraphs:

1

APR 2 7 2008

[0025]    Referring now specifically to the drawings, Figure 1 is a block diagram 10 illustrating an example embodiment of an information system for variance tracking. A system server 12 provides users with access to operational information for asset management 14, recorded into a data warehouse 16 in an ongoing basis from other applications residing on a network, e.g., a local area network. The data warehouse 16, in an example embodiment, is an Oracle database, commercially available from Oracle Corporation, Redwood Shores, California.

[0026]    The information stored in data warehouse 16 includes, for example:

Borrower Contact Information,

Contact Action / Results History,

Borrower Characteristics (e.g., size of outstanding balance, nature of collateral security, lien information, historical payment performance, litigation status, and underwritten valuation), and

Asset Management Milestones (with corresponding dates and expected "recovery" amounts where appropriate*):  Not Contacted, In Negotiation, Scheduled for Approval, Approved*, Approved Delinquent, Closed*, Closed Delinquent, Paid-In-Full, and Foreclosed*.

[0027]    Portfolio administrators 18 construct periodic (e.g., annual, quarterly) business plans 20 for debtor groups (e.g., individuals, borrower alliances, and portfolio segments). The business plans 20 include the expected monthly cash payments made by the debtor groups. The time horizon (beginning month to ending month) of the business plans 20 for each debtor group is the same (e.g., January 2001 to December 2005).

[0028]    Portfolio administrators 18 choose among various available borrower, loan, and collateral characteristics pertaining to the debtor group. These characteristics are used for subsequent "data mining" purposes (e.g., prioritizing debtor groups, stratified by their

2

common group characteristics, according to each stratum's contribution to an overall variance calculation as described below).

[0029]    Once debtor groups have progressed through asset milestone phases and achieve a negotiated settlement (i.e., are "closed"), loan servicing 22 issues notification of contractual cash payments.  As payments are received, they are posted in a cash management system 24, from which general ledger 26 accounting entries are made.  For non-performing loans, these contractual cash flows usually sum to considerably less than the balance owed to the original credit issuer.  A purchaser of non-performing loan portfolios (from the original credit issuer or subsequent purchaser) aims to collect more than his/her purchase price for each debtor group in the portfolio.

[0030]    The systems and methods described herein facilitate determining how well the periodic business plans are borne out in reality and in addition, allow for the identification of portfolio segments (strata) which are the chief contributors to slippages (or accelerations) in actual payments made, as compared to the business plans (or contractual cash flows). These functions are sometimes referred to herein as variance tracking.  Such functions are performed in the system illustrated in Figure 1 by the variance tracker database 28 (illustrated in Figure 1 and sometimes referred to herein as the variance tracker DataMart) and the variance tracker client 30.  More specifically, data from data warehouse 16 and from the business plans 20 is stored in database 28, and variance tracker client 30 is an application program executed by the personal computer to perform the functions described above (i.e.,  variance tracking).

[0031]    More particularly, and referring to Figure 2, variance tracker database 28, i.e., DataMart, is created by performing certain tasks on an annual/quarterly and monthly basis.  For example, business plans 20 are created on an annual or quarterly basis.  The DataMart 28 is data stored on the personal computer memory utilizing the data management system 12 (e.g., the Access data management system), as described above.  The plans 20 are comprised of expected monthly cash flows for each debtor group, and are uploaded to

variance tracker DataMart 28. Business plans 20 can be for a single borrower, borrower alliances, and portfolio segments.

[0032]  The business plans 20 are usually created in a normalized format (i.e., a matrix format – with debtor group ID's in rows, and monthly expected payments in columns). The normalized format is converted to a de-normalized 36 , or list-oriented, version of the business plan 20. The number of months between a starting month and each payment month – a Time Series ID - is assigned (i.e., monitoring may start in January, 2001, and payments made in May, 2001, June, 2001, or months 5 and 6, respectively) to each plan 20. De-normalization 36 occurs each time business plans 20 are uploaded.

[0033]  On a monthly basis, debtors progress through a standardized series of asset milestones. Monitoring the transition of borrowers through these critical junctures provides indication of the asset management performance. The asset milestone 38 progress therefore is tracked and organized by asset ID. In addition, actual cash collections in each month are uploaded and assigned a Time Series ID. The cumulative cash collections 40 (Cume Cash Collections) are organized by SubAsset ID and by Asset ID in a table format. As cash payments may be tracked at a different level (e.g., by loan) than that of other database entities (e.g., asset milestones, data mining characteristics, business plans), a map associating these different levels (ID Maps 42) is updated and uploaded. Specifically, the ID Map 42 associates Asset ID and SubAsset ID to specific loans. Expected payments from business plans for each debtor group, for each time series ID is associated, or linked 44, with actual payments, aggregated from SubAsset ID to Asset ID (debtor group ID) by Time Series ID.

[0034]  Appendix A contains database schematics (DS) that can be utilized in building one example embodiment of variance tracker DataMart 28. Specifically, DS 1 is a database schematic for the CFIDs (a.k.a., "Cash Flow ID's"), DS 2 is for payment data, DS 3 is for approved (i.e., accepted by investors) business plans, DS 4 is for large (i.e., borrowers with large balances) business plans, DS 5 is for buckets (i.e., portfolio segments) business plan, DS 6 is for business plan totals, DS 7 is for milestones, DS 8 is for CFIDs without

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business plans, DS 9 is for variance tracking data, DS 10 is for variance tracking data, DS 10 is for subtype export data, and DS 11 is for subtype export data.

[0035] Once a DataMart 28 is created, then a variance tracker client 30 is utilized to generate a transition inventory matrix 46, which illustrates key portfolio statistics and variance calculations for any selected (drilled-down) segment of the portfolio, and by asset milestone one-month status changes. The matrix is generated by the personal computer using, for example, the Excel spreadsheet program, as described above. A transition inventory matrix can be created for any historical month, beginning with the first month of portfolio monitoring. Using the transition inventory matrix 46, sources and movements over time of borrowers, payments, and variances can be assessed 48. Such assessment 48 can be utilized to better identify asset management process improvements, resulting in an improved ability to manage strategic operations.

[0036] Figures 3 – 9F illustrate one example of creating DataMart 28 and constructing a transition inventory matrix 46. More particularly, Figure 3 illustrates normalization of a business plan 20. Specifically, from an initial plan matrix 50 which depicts accounts (rows) across plan months (columns), normalization creates a list-oriented format 52 which is useful for subsequent matching.

[0037] Planned payments are then coded as illustrated in Figure 4. Such coding refers to translating the contents of a time field 54 (in the example, a "Month") into an index of time 56, namely, identify the number of months from a selected point in time to which the record pertains. For example, if the selected point in time is November, 2000 (i.e., November, 2000 = month index 1), then the month of January, 2001 corresponds to a month index of 3 as illustrated in Figure 4.

[0038] Actual payments 58 also are coded 60, as illustrated in Figure 5. The same coding methodology utilized to code the planned payments is utilized to code the actual payments.

APR 2 7 2001

[0039]    Referring now to Figure 6, and for variance analysis of cumulative plan versus actual differences, from a specific point in time through a current month 62 (e.g., from November, 2000 through March, 2001), the user must specify the index of the time assessment (in the example, month index 5). By so specifying the month index 64, then a transition inventory matrix 46 can be created for assessment.

[0040]    Once the month index 64 is specified, then as shown in Figure 7, matching and cumulative variance through the specified period of time can be determined. Cumulative (cume) variance 70 is the difference between cume plan 72 and cume actual 74 up through and including the time of assessment 76 (in the example, the 5th month index).

[0041]    Referring to Figure 8, the cume variance 70 can be performed for any desired time of assessment 76. Assessments between two different time periods 80, 82 are used to create a transition inventory matrix 46, which illustrates how accounts move through a management system, and which accounts are producing the largest contribution to cume variance. In the example illustrated in Figure 8, accounts that were approved 84 and previously closed currently 86 are producing 28 units of cume variance. Accounts that were closed previously 88 and now delinquent 90 are also producing this amount of cume variance.

[0042]    Figures 9A-F illustrate a transaction inventory matrix 46 representing an assessment of 3376 accounts. The matrix is created using, for example, the Excel spreadsheet program commercially available from Microsoft Corporation, Redmond, Washington. The spreadsheet is populated using the data stored in DataMart 28 and based on the time period selected by the analyst for assessment.

[0043]    Typically, accounts will advance in management milestones from one month (or time of assessment) to the next. Bottlenecks can be identified by accumulation of variance. In the example shown in Figures 9A-F, accounts which are 'prior –to-approval' 100 in both the current and previous periods (1487 accounts) have generated the greatest amount of plan versus actual variance (approximately –2MM currency units).

APR 2 7 2000

[0044]   Using the pivot tables in the Excel program, an analyst can "drill down" using account characteristics that may be drivers of variance. More particularly, and in the example shown in Figures 9A-F, in the upper left hand corner of the pivot tables, five variables 102 are listed. These variables 102 can be used to isolate problematic account segments. An analyst simply uses the 'drop down' boxes to select an account segment (for example, "Real Estate Secured" as an attribute of the characteristic "Collateral Type"). The pivot table is automatically updated to reflect the selected segment's contribution to variance. Account segments can be rank-ordered in terms of their contribution.

[0045]   Example user interfaces are described below in connection with Figures 10 – 13. Of course, many different formats and selections can be utilized for the user interface and the user interfaces illustrated below in Figures 10 - 13 are example user interfaces. Figure 10 is a screen shot of an example user interface. A date selection 110 (i.e., Today's date is) points to a current date as a default. The date can be changed by selecting a drop down button. Once the drop down button is selected, a calendar 112, as shown in Figure 11, is displayed. A new date is selected by 'double clicking' on the desired date. Once the date is selected, the user then selects "Transistion Inventory with new data" 114.

[0046]   As shown in Figure 12, a user can select "Transistion Inventory with existing data" 116, which results in display of a pivot table with the most recently accessed data. A user also can select "Transition Inventory with new data" 114, which results in display of a pivot table with newly generated data and the selected date. A user can also select "View data"118, which results in display of data for which the pivot table is being displayed. A user can also select "View sub-type data" 120, which results in display of sub-type data. A user can further select "Import new files into the database" 122, which results in importing new data into the system using a user interface as shown in Figure 13.

[0047]   As shown in Figure 13, the import new files user interface includes a browse selectino button so that a user can select a data file to import. Selecting the "Import Sub Asset" button 124 results in importing the sub-asset data from the data file. Selecting the import payments buttons 126 (in the example, shown as the "Import Silverlake Payments"

button) results in importing the payment data. Selecting the Import Asset Milestone button

128 results in importing the asset milestone data. Selecting the "Back" button 130 results in

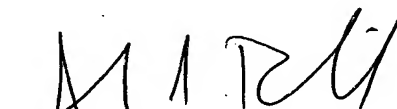returning processing to the main interface screen (e.g., the screen shown in Figure 10).

## Remarks

Submitted herewith is a Request for Approval of Formal Drawings and Drawing

Changes. Reference labels 10-130 have been inserted into the drawings. Additionally,

Figure 9 has been expanded into multiple drawing sheets to meet font size requirements.

Specifically, originally filed Figure 9 is now illustrated in Figures 9A, 9B, 9C, 9D, 9E, and

9F.

In anticipation of the approval of the drawing change, Applicants are submitting

formal drawings incorporating the above-noted changes. No new matter has been added.

The specification has been amended in accordance with the inserted labels and new

figures. Submitted herewith is a Submission of Marked Up Paragraphs.

Favorable action is respectfully solicited. If any fee is due, please charge Deposit

Account No. 01-2384.

Respectfully Submitted,

John S. Beulick
Registration No. 33,338
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

APR 2 7 2000

17243-00042
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keyes et al.                    :
                                            :    Art Unit: 2164
Serial No.: 10/035,968                      :
                                            :    Examiner:
Filed: December 31, 2001                    :
                                            :
For:    METHODS AND SYSTEMS                 :
        FOR ASSESSING LOAN                  :
        PORTFOLIOS                          :


## SUBMISSION OF MARKED UP PARAGRAPHS

Commissioner for Patents
Washington, D.C. 20231

Submitted herewith are marked up paragraphs in accordance with 37 C.F.R.
1.121(b)(1)(ii).

IN THE SPECIFICATION

On page 3, please delete paragraph [0017] and replace with the following paragraph:

[0017]    Figure [9 illustrates a]9A is a first portion of the illustrated transition
inventory display.  Figure 9B is a second portion of the illustrated transition inventory
display.  Figure 9C is a third portion of the illustrated transition inventory display.  Figure 9D
is a fourth portion of the illustrated transition inventory display.  Figure 9E is a fifth portion
of the illustrated transition inventory display. Figure 9F is a sixth portion of the illustrated
transition inventory display;

On pages 5-10, please delete paragraphs [0025] – [0047] and replace with the
following paragraphs:

1

APR 2 7 2009

[0025]   Referring now specifically to the drawings, Figure 1 is a block diagram 10 illustrating an example embodiment of an information system for variance tracking.  A system server 12 provides users with access to operational information for asset management 14, recorded into a data warehouse 16 in an ongoing basis from other applications residing on a network, e.g., a local area network.  The data warehouse 16, in an example embodiment, is an Oracle database, commercially available from Oracle Corporation, Redwood Shores, California.

[0026]   The information stored in data warehouse 16 includes, for example:

Borrower Contact Information,

Contact Action / Results History,

Borrower Characteristics (e.g., size of outstanding balance, nature of collateral security, lien information, historical payment performance, litigation status, and underwritten valuation), and

Asset Management Milestones (with corresponding dates and expected "recovery" amounts where appropriate*):  Not Contacted, In Negotiation, Scheduled for Approval, Approved*, Approved Delinquent, Closed*, Closed Delinquent, Paid-In-Full, and Foreclosed*.

[0027]   Portfolio administrators 18 construct periodic (e.g., annual, quarterly) business plans 20 for debtor groups (e.g., individuals, borrower alliances, and portfolio segments).  The business plans 20 include the expected monthly cash payments made by the debtor groups.  The time horizon (beginning month to ending month) of the business plans 20 for each debtor group is the same (e.g., January 2001 to December 2005).

[0028]   Portfolio administrators 18 choose among various available borrower, loan, and collateral characteristics pertaining to the debtor group.  These characteristics are used for subsequent "data mining" purposes (e.g., prioritizing debtor groups, stratified by their

2

APR 2 7 2005.

common group characteristics, according to each stratum's contribution to an overall variance

calculation as described below).

[0029]    Once debtor groups have progressed through asset milestone phases and

achieve a negotiated settlement (i.e., are "closed"), loan servicing 22 issues notification of

contractual cash payments.  As payments are received, they are posted in a cash management

system 24, from which general ledger 26 accounting entries are made.  For non-performing

loans, these contractual cash flows usually sum to considerably less than the balance owed to

the original credit issuer.  A purchaser of non-performing loan portfolios (from the original

credit issuer or subsequent purchaser) aims to collect more than his/her purchase price for

each debtor group in the portfolio.

[0030]    The systems and methods described herein facilitate determining how well

the periodic business plans are borne out in reality and in addition, allow for the identification

of portfolio segments (strata) which are the chief contributors to slippages (or accelerations)

in actual payments made, as compared to the business plans (or contractual cash flows).

These functions are sometimes referred to herein as variance tracking.  Such functions are

performed in the system illustrated in Figure 1 by the variance tracker database 28 (illustrated

in Figure 1 and sometimes referred to herein as the variance tracker DataMart) and the

variance tracker client 30.  More specifically, data from data warehouse 16 and from the

business plans 20 is stored in database 28, and variance tracker client 30 is an application

program executed by the personal computer to perform the functions described above (i.e.,

variance tracking).

[0031]    More particularly, and referring to Figure 2, variance tracker database 28,

i.e., DataMart, is created by performing certain tasks on an annual/quarterly and monthly

basis.  For example, business plans 20 are created on an annual or quarterly basis.  The

DataMart 28 is data stored on the personal computer memory utilizing the data management

system 12 (e.g., the Access data management system), as described above.  The plans 20 are

comprised of expected monthly cash flows for each debtor group, and are uploaded to

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variance tracker DataMart 28. Business plans 20 can be for a single borrower, borrower alliances, and portfolio segments.

[0032] The business plans 20 are usually created in a normalized format (i.e., a matrix format – with debtor group ID's in rows, and monthly expected payments in columns). The normalized format is converted to a de-normalized 36 , or list-oriented, version of the business plan 20. The number of months between a starting month and each payment month – a Time Series ID - is assigned (i.e., monitoring may start in January, 2001, and payments made in May, 2001, June, 2001, or months 5 and 6, respectively) to each plan 20. De-normalization 36 occurs each time business plans 20 are uploaded.

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APR 2 7 2005

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APR 2 7 2009

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APR 2 7 2009.

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7

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128 results in importing the asset milestone data. Selecting the "Back" button 130 results in
returning processing to the main interface screen (e.g., the screen shown in Figure 10).

Respectfully Submitted,

John S. Beulick
Registration No. 33,338
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

APR 2 7 2000